



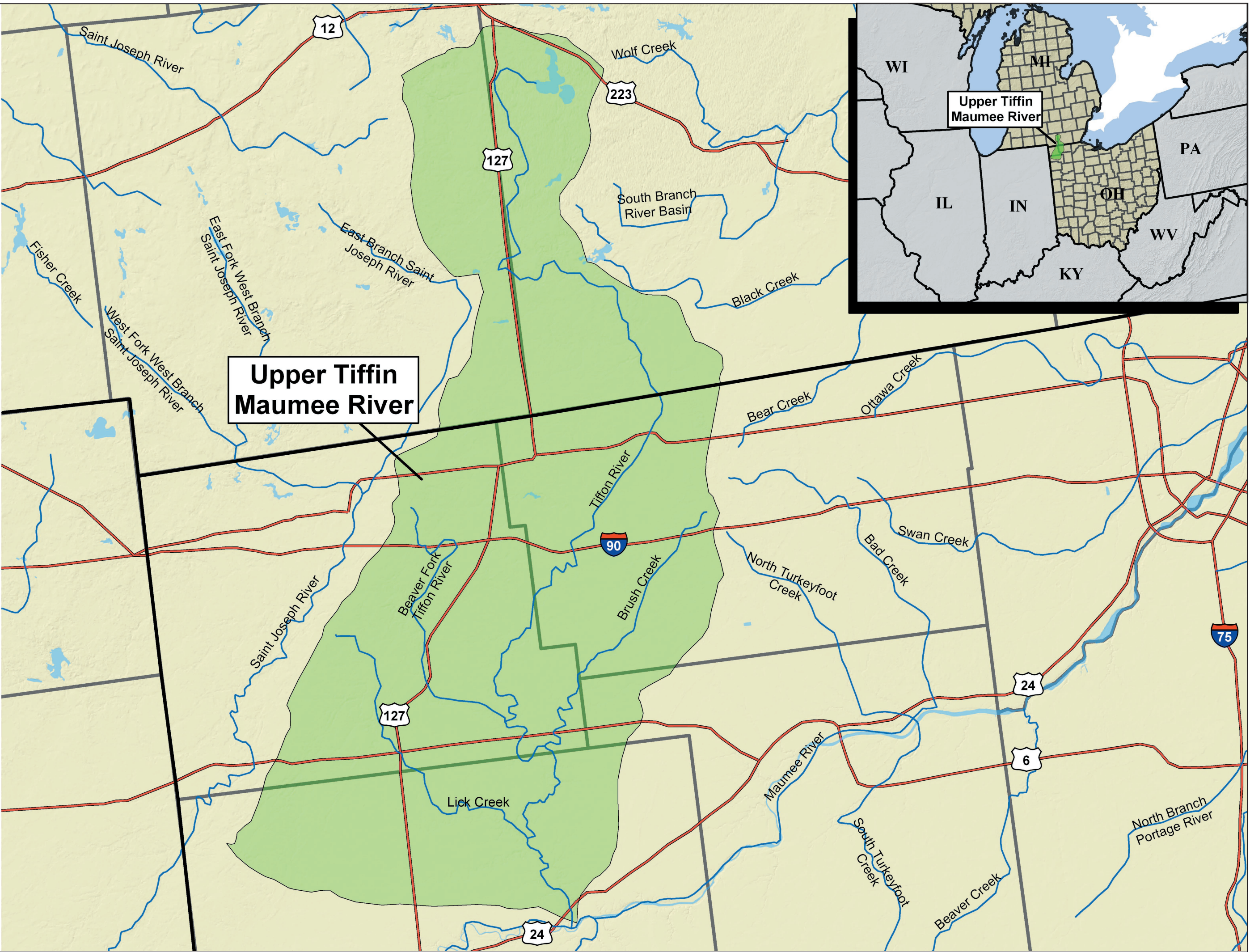
United States Department of Agriculture

Conservation Effects Assessment Project (CEAP)

Upper Tiffin Watershed, Michigan: 2004-2007



An NRCS* Special Emphasis Watershed, one of 24 CEAP watershed projects.



CEAP Assessment

Evaluate effects of management and conservation practices on movement of manure and nutrients from tile-drained farm fields.

Watershed Description

Representative of intensively drained watersheds in the Great Lakes region.

- 91% farmland (Lime Creek); 75% farmland (Bean Creek)
- A Total Maximum Daily Load (TMDL) has been established for pathogens.

Issues: Manure and nutrient loading from large livestock farms polluting waterways.

*Natural Resources Conservation Service

Approach

Water sampling: Pathogens, nutrients

Watershed models: AnnAGNPS (Annualized Agricultural Non-Point Source)

Field trials: Various manure management and drainage practice combinations will be compared to determine best ways to reduce movement of manure via underground drainage tiles.

Communicating Results

Three annual progress reports planned, covering effects of conservation practices on manure contamination of drain outflow in small and large area studies. A risk assessment tool will be developed.

Collaborators

- USDA, Natural Resources Conservation Service, Ohio
- USDA, Natural Resources Conservation Service, Michigan
- U.S. Geological Survey
- Lenawee Conservation District
- Michigan Department of Environmental Quality
- Michigan Agriculture Environmental Assurance Program

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Bean Creek with Sean Duffey (NRCS Water Resources Coordinator/Geologist) and Jason Firster (Lenawee Conservation District Watershed Technician) evaluating stream morphology.



Manure spreader.



A tile outlet.

Timeline

2003 Initial funding	2004 August CEAP bibliographies	2005 May Wetlands peer review	July Wildlife literature review (program-based)	October Cropland literature reviews Wildlife literature review (practice-based) Wildlife Work Plan	November Wetlands Work Plan	December Draft findings—Prairie Pothole region
2006 February Preliminary habitat quality models— Prairie Potholes wetland region	March Preliminary National Assessment Report	2007 Fall National Assessment Final Report Special Emphasis Watershed reports				